REMARKS

Claims 1-28 are all the claims pending in the application.

Claim Rejections - 35 U.S.C. § 102

Claims 1, 4-6, 9-11, 13, 17-19, 21 and 25-28 are rejected under 35 U.S.C. 102(e) as allegedly being anticipated by Liu. For at least the following reasons, Applicant respectfully traverses the rejection.

Claim 1 recites a system for reliably broadcasting a data packet under an ad-hoc network environment comprising, *inter alia*, "a comparing unit operable to compare a first relay node sequence number with a second relay node sequence number, the first relay node sequence number being contained in a management packet received by at least one node transmitting the data packet, the second relay node sequence number being stored in a neighbor table of the at least one node". That is, the claimed at least one node transmits a data packet, and receives a management packet. The first relay node sequence number is contained in the management packet received by the at least one node. The second relay node sequence number is stored in a neighbor table of the at least one node. The claimed comparing unit then compares the received first relay node sequence number and the stored second relay node sequence number.

Liu is directed toward establishing routes and transferring information between nodes in ad-hoc data communication networks using on-demand multicast and unicast techniques, which are referred to collectively as Controlled Flood Multicast (CFM) (abstract; col. 3, lines 63-67). Liu discloses that when a node receives a unicast message, the message sequence number and originating node identifier are compared against a list containing similar information from previously received messages (col. 29, lines 26-30). The Examiner asserts that this disclosure of

Lui corresponds to the claimed comparing unit. However, Lui discloses that a node that ***receives*** a unicast message performs the comparison. The node then, based on the comparison, either forwards the unicast message to a destination unit, forwards the unicast message to another node, or destroys the message (col. 29, lines 29-38). That is, the received unicast message corresponds to the claimed data packet. Lui merely discloses a node which receives the unicast message/data packet performing a comparison to determine whether the node is a destination of the unicast message/data packet or whether the unicast message/data packet is a duplicate. In contrast, the claimed invention recites an at least one node transmitting a data packet, then receiving a management packet, and performing a comparison bases on the received management packet. Lui fails to teach or suggest a sending node, which transmits the unicast message, receives a management packet and also fails to teach or suggest a comparing unit which performs a comparison based on the received management packet.

Claim 1 further recites, *inter alia*, "a control unit operable to determine whether or not the data packet is retransmitted by the at least one node according to a result of the comparison". The Examiner refers to col. 5, lines 46-59 of Liu as allegedly disclosing this claimed feature.

The cited portion of Lui discloses that "[to] route multicast traffic, a CFM communication node uses a controlled-flood technique to dynamically determine whether it should rebroadcast a flooded message based upon the present state of internally maintained network topology" (col. 5, lines 46-50). Lui further discloses that "each CFM node has access to such highly accurate and useful topology and route information" (col. 6, lines 63-64) and therefore "the node itself determines whether it should rebroadcast the flooded message based upon its internally maintained neighbor set network topology information" (col. 7, lines 8-10). For example, Lui discloses that "Nodes that receive a unicast message via controlled flooded will

attempt to retransmit the message using ordinary unicast (i.e., next hop unicast), if the node is able to determine an appropriate next hop" and otherwise the node retransmits the unicast message using controlled flood techniques (col. 21, lines 44-59). That is, Lui merely discloses each node along a transfer path (i.e. each hop) retransmitting the message toward the next hop or destination. Lui does not teach or suggest retransmitting a data packet (i.e. unicast message) by a node which has already transmitted the data packet once before, as recited in claim 1.

Lui further discloses that when a message is transmitted, an acknowledgement timer is set (col. 29, lines 50-51). If a link ACK is not received within the timeout period, the node will retransmit the unicast message (col. 29, lines 17-20). However, this retransmission is sent merely on the basis of the acknowledgement timer. In contrast, claim 1 recites that "the data packet is retransmitted by the at least one node ***according to a result of the comparison***" where the claimed comparison is between a first and second relay node sequence number. Clearly Lui fails to teach or suggest at least this claimed feature.

At least based on the foregoing, Applicant respectfully submits that claim 1 is patentable over the applied reference. Applicant further submits that claims 4-5 are patentable at least by virtue of their dependency on claim 1.

Independent claims 6, 11, and 19 recite one or more features analogous to those discussed above with respect to claim 1. Accordingly, Applicant respectfully submits that these claims are patentable over Lui at least for reasons analogous to those given above with respect to claim 1. Applicant further submits that claims 9-10, 13, 17-18, 21 and 25-28 are patentable at least by virtue of their respective dependency on claims 6, 11 or 19.

Claim Rejections - 35 U.S.C. § 103

Claims 2, 7, 12 and 20 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Liu in view of Ogier (U.S. Patent No. 7,031,288 B2). Claims 3 and 8 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Liu in view of Rhee (U.S. Publication No. 2003/0099221 A1). Claims 14, 16, 22 and 24 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Liu in view of Riihinen et al. (U.S. Patent No. 6,697,331 B1; hereinafter "Riihinen"). Claims 15 and 23 are rejected under 35 U.S.C. 103(a) as allegedly being unpatentable over Liu in view of Riihinen as applied to claim 11, 14, 19 and 22 above, and further in view of Zhu et al. (U.S. Patent No. 5,768,527; hereinafter "Zhu"). For at least the following reasons, Applicant respectfully traverses the rejection.

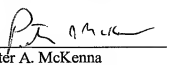
Since neither Ogier, Rhee, Riihinen nor Zhu, independently or in combination, address the deficiencies of Liu noted above, Applicant respectfully submits that claims 2, 3, 7, 8, 12, 14-16, 20, and 22-24 are patentable over the applied references at least by virtue of their dependence on independent claims 1, 6, 11, or 19.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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